

EUROPEAN PATENT OFFICE

Patent Abstracts of Japan

PUBLICATION NUMBER : 61240629
PUBLICATION DATE : 25-10-86

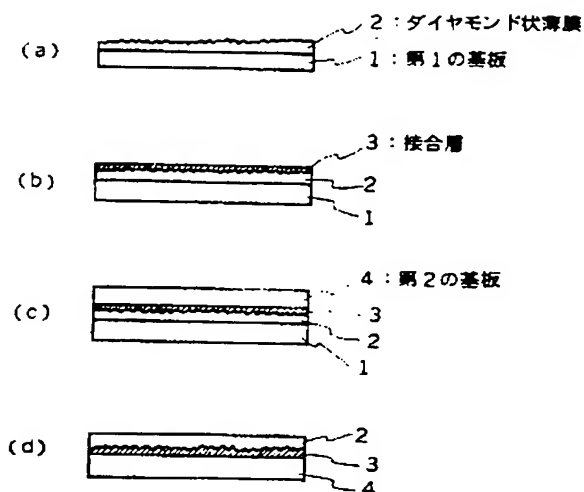
APPLICATION DATE : 17-04-85
APPLICATION NUMBER : 60081559

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INT.CL. : H01L 21/205 H01L 21/304

TITLE : MANUFACTURE OF SUBSTRATE



ABSTRACT : PURPOSE: To obtain a substrate equipped with a diamond shape thin film having superior surface flatness, by jointing the second substrate, through a jointed layer, on the diamond shape thin film formed on the first substrate and then removing the first substrate.

CONSTITUTION: A silicon substrate 2 of 0.3mm in thickness is used as the first substrate 1 and a diamond-shape thin film 2 is deposited on it by exciting a mixing gas of CH_4 and H_2 with high frequency non-polar discharge with frequency of 13.56MHz. A jointed layer 3 is a material evaporation deposited and metallized with Ti, Pt, and Au. A silicon substrate of 0.3mm in thickness, which has been similarly metallized, is used as the second substrate 4 and jointed with an Au layer being fuse-bonded. The first substrate can be removed by grinding, however, the possibly remaining part of silicon, which can not be removed by grinding, is removed by well-known method.

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